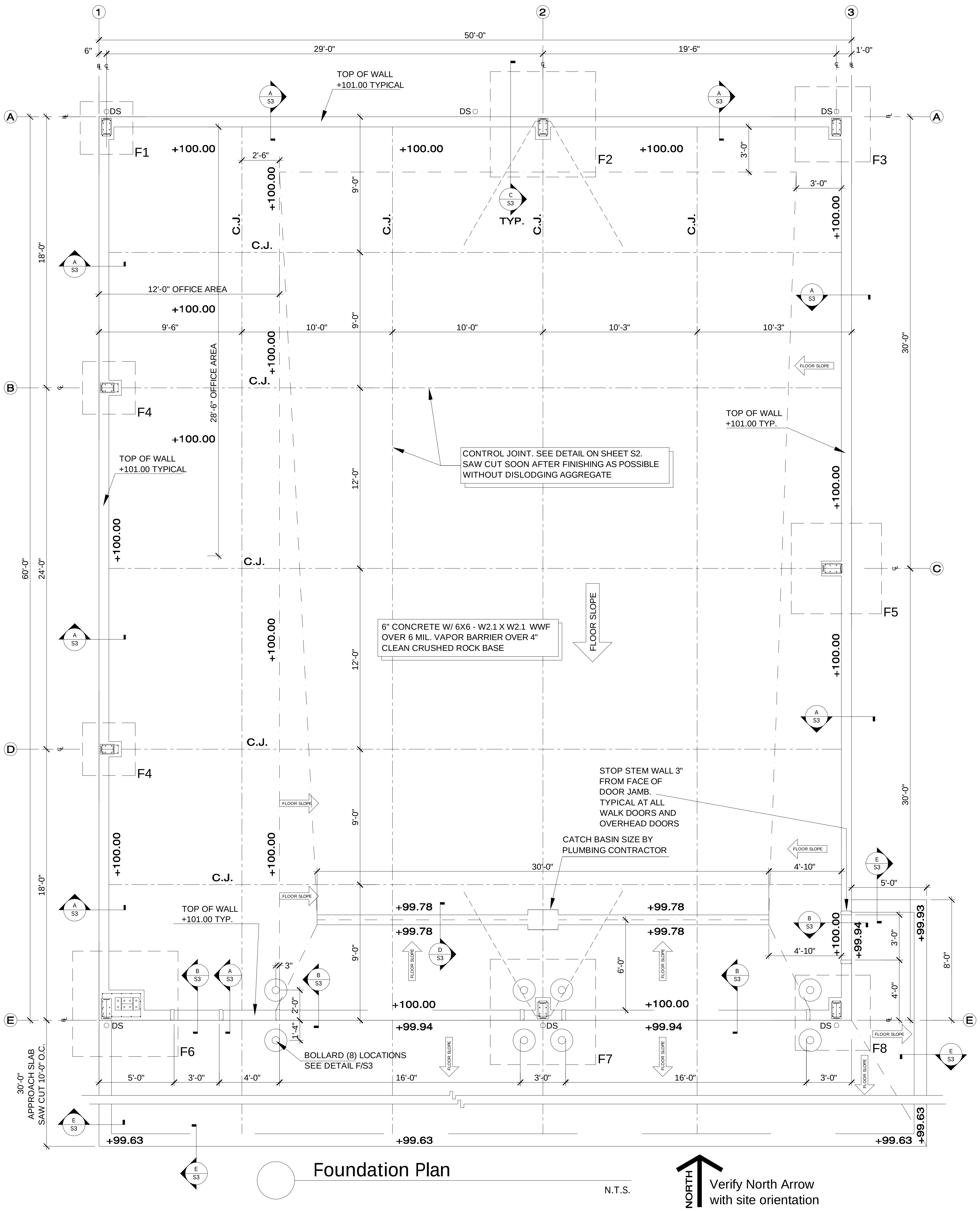


Foundation Plan

N.T.S.

NORTH
Verify North Arrow
with site orientation

STRUCTURAL NOTES

LOAD DATA:

2012 INTERNATIONAL BUILDING CODE

BUILDING RISK/OCCUPANCY CATEGORY: 2 (STANDARD OCCUPANCY STRUCTURE)

DEAD LOAD	= SELF-WEIGHT OF THE STRUCTURAL COMPONENTS AND ROOFING MATERIAL. PERMANENT EQUIPMENT BELOW ROOF LINE (CEILING, LIGHTING, INSULATION, ETC.).
COLLATERAL GRAVITY ROOF COVERING	= 5.00 PSF
+ SECONDARY DEAD LOAD	= 2.52 PSF
ROOF LIVE LOAD	= 20 PSF REDUCIBLE
WIND SPEED	= 115.00 MPH (ULTIMATE) - 89.08 MPH (ASD)
GROUND SNOW LOAD	= 20.00 PSF
FLAT ROOF SNOW	= 16.80 PSF
SPECTRAL RESPONSE - Ss	= 12.00 %g
SPECTRAL RESPONSE - Sl	= 7.00 %g
WIND EXPOSURE (FACTOR)	= C
SEISMIC DESIGN CATEGORY	= B

GENERAL FOUNDATION NOTES

1. ALL WORK TO BE DONE IN ACCORDANCE WITH 2012 INTERNATIONAL BUILDING CODE & ALL LOCAL, CITY & STATE CODES.
2. ALL PERIMETER FOOTINGS AND GRADE BEAMS SHALL BEAR A MINIMUM OF 24" BELOW FINISHED GRADE AND A MINIMUM OF 18" INTO UNDISTURBED SOIL OR PLACED ON 95% STD. PROCTOR COMPACTED FILL. WHERE PLACED ON COMPACTED FILL, FTGS. SHALL BE PLACED AT LEAST 12" BELOW THE COMPACTED SURFACE AN INDEPENDENT TESTING LABORATORY SHALL PERFORM SOIL COMPACTION TESTS AND SUBMIT WRITTEN REPORTS TO THE ARCHITECT PRIOR TO THE CONTRACTOR'S PLACING FTGS. ON COMPACTED FILL. UNDER NO CIRCUMSTANCES SHALL THE FTGS. BE LESS THAN 30" BELOW FINISH GRADE.
3. NO FOOTING TRENCH SHALL BE OPENED WITHOUT HAVING REINFORCING AND CONCRETE READY TO BE PLACED WITHIN THAT WORKING DAY. ANY VARIATION FROM THIS PROCEDURE REQUIRES THE APPROVAL OF THE ARCHITECT. ALL FOOTINGS SHALL BE CENTERED UNDER WALLS UNLESS NOTED OTHERWISE.
4. BEARING SURFACES AT THE BOTTOM OF EXCAVATIONS SHALL BE PROTECTED FROM EITHER INUNDATION OR DRYING OUT DURING THE EXCAVATION PROCESS. CONTRACTOR SHALL PROVIDE POSITIVE SURFACE DRAINAGE DURING CONSTRUCTION.
5. ALL CONCRETE SHALL BE MADE FROM TYPE II CEMENT WITH A 28 DAY COMPRESSIVE STRENGTH AS NOTED BELOW.

LOCATION	28 DAY PSI	SLUMP	MAX. AGGR.
FOOTINGS	3500	4-6"	1 1/2"
SLAB ON GRADE	4000	2-4"	1"
FOUNDATION WALL	4000	4-6"	1 1/2"
STAIRS & STEPS	4000	1-4"	1"
SIDEWALKS & DRIVES	4000	2-4"	1"

6. CONCRETE MIX SHALL CONFORM TO ASTM C94. AGGREGATES SHALL CONFORM TO ASTM C33. ALL CONCRETE WITH EXTERIOR EXPOSURE SHALL HAVE AIR ENTRAINMENT AS PER ASTM C260.
7. UNLESS OTHERWISE NOTED, CLEAR CONCRETE COVER OVER STEEL REINFORCEMENT SHALL CONFORM TO THE MINIMUM REQUIREMENTS OF THE CURRENT EDITION OF ACI CODE 318 AS FOLLOWS:
   CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH ....3"
   CONCRETE EXPOSED TO EARTH OR WEATHER (FORMED & POURED).............................1 1/2"
8. THE USE OF ADMIXTURES, INCLUDING CALCIUM CHLORIDE, IS NOT PERMITTED WITHOUT THE CONSENT OF THE ARCHITECT.
9. REINFORCING BARS SHALL BE NEW BILLET STEEL. ASTM 615, GRADE 60. PROVIDE CONTINUOUS BENT BARS AT FOOTING STEPS & 90 DEGREE BENT TIES AT CORNERS. UNLESS OTHERWISE NOTED, LAP SPLICES & EMBEDMENT LENGTH SHALL CONFORM TO THE CURRENT ACI CODE 318.
10. PROVIDE CORNER BARS EQUAL TO ADJACENT BAR SIZE, OR BEND LONGITUDINAL BARS.
11. ADJACENT BAR SPLICES IN WALLS AND FOOTINGS SHALL ALTERNATE.
12. WELDED WIRE FABRIC SHALL CONFORM TO THE CURRENT ASTM SPECIFICATION FOR COLD DRAWN STEEL REINFORCEMENT WIRE. LAP END AND EDGES A MINIMUM OF 6".
13. REINFORCEMENT DETAILING AND PLACEMENT SHALL CONFORM TO CURRENT ACI CODE 318 EXCEPT WHERE OTHERWISE INDICATED.
14. ALL REINFORCING IS TO BE FABRICATED AND PLACED IN STRICT ACCORDANCE WITH THE ACI DETAILING MANUAL, LATEST EDITION.
15. TYPICAL CONCRETE SLAB: 6" SLAB W/ 6X6 - W2.1 X W2.1 WWF OVER 4" CRUSHED STONE BASE.
16. ALL EXTERIOR OR EXPOSED CONCRETE SHALL BE CONSOLIDATED BY INTERNAL VIBRATION IN ACCORDANCE WITH A.C.I. 309 "RECOMMENDED PRACTICE FOR CONSOLIDATION OF CONCRETE".
17. ALL REINFORCING SHALL BE FREE OF RUST, DIRT, AND MILL SCALE PRIOR TO PLACEMENT OF CONCRETE.
18. ASSUMED SOIL BEARING CAPACITY OF 2000 PSF USED IN DESIGN OF THIS STRUCTURE. FIELD VERIFY CONDITIONS & IF WEAKER SOILS ARE ENCOUNTERED REDESIGN AS REQUIRED.
19. THE BASE OF THE FOOTING EXCAVATIONS MUST BE COMPACTED WITH MECHANICAL TAMPERS PRIOR TO PLACING REINFORCING STEEL.
20. IN THE EVENT ORGANIC SOIL IS FOUND BELOW FOOTINGS OR FLOOR SLABS, IT SHALL BE REMOVED AND REPLACED WITH SELECT FILL, COMPACTED IN 8" LIFTS AND COMPACTED TO AT LEAST 95 PERCENT OF MAXIMUM DENSITY AS DETERMINED BY STANDARD PROCTOR PROCEDURES (ASTM D 698).
21. FOOTING EXCAVATIONS SHOULD BE INSPECTED BY THE GEO-TEC ENGINEER TO VERIFY THAT FOOTINGS BEAR ON SUITABLE SOILS PRIOR TO PLACING REINFORCING STEEL. FOOTING SIZE BASED ON 2000 PSF SOIL BEARIING CAPACITY - CONTRACTOR TO VERIFY SOIL CONDITIONS & ADJUST FOOTINGS AS REQUIRED (DO NOT DECREASE FROM SIZE SHOWN).
22. FIBERMESH IN CONCRETE NOT ACCEPTABLE IN LIEU OF WOVEN WIRE MESH.
23. 2'-0" (MIN.) DIAMOND SHAPED CLOSURE AT COLUMNS, TYPICAL.
24. ALL EXPOSED CONCRETE EDGES AND CORNERS SHALL BE CHAMFERED 3/4".
25. INTERIOR SLABS SHALL BE SMOOTH TROWELLED. EXTERIOR SLABS SHALL HAVE A LIGHT BROOM FINISH, UNLESS OTHERWISE NOTED. ALL SLABS SHALL HAVE A CURING COMPOUND APPLIED TO THE SURFACE, COMPLYING WITH ASTM C309, UNLESS CURING COMPOUNDS ARE NOT COMPATIBLE WITH REQUIRED ADHESIVES OR FINISHES.
26. THE ELEVATIONS ARE GIVEN WITH REFERENCE TO FINISH FLOOR DATUM 100'-0".
27. VERIFY ALL DIMENSIONS, SLOPES, DEPRESSIONS, EMBEDMENT, ETC BEFORE PLACING CONCRETE.
28. FOOTING ELEVATIONS NOTED ON THE FOUNDATION MAY BE LOWERED AS NECESSARY TO OBTAIN THE SPECIFIED BEARING CAPACITY AND/OR COVER.
29. LAP ALL UNDER SLAB VAPOR BARRIER SHEETS A MINIMUM OF 6" AT ALL SPLICES.
30. FOR FUTURE SLAB (IF ANY), PROVIDE SLAB CONTROL (CJ) AT 12'-0" O.C. MAX. CJ's SHALL BE APPROX. 1/3 OF THE SLAB DEPTH AND SHALL BE SAW CUT AS SOON AS POSSIBLE (WITHIN 12 HOURS OF POUR).

SPECIFIC FOUNDATION NOTES

1. SEE METAL BUILDING SUPPLIER ANCHOR ROD AND DETAILS FOR EXACT LOCATIONS OF ANCHORS.
2. ASSUMED SOIL CAPACITY OF 2000 PSF.

9/22/16

STATE OF MISSOURI
SALAH A. YOUSEF
NUMBER E-26933
REGISTERED PROFESSIONAL ENGINEER

REVISED
-

BLUESCOPE CONSTRUCTION
PROJECT # G-16085
MoDOT Milan Mechanics
Milan. MO

Project Engineer

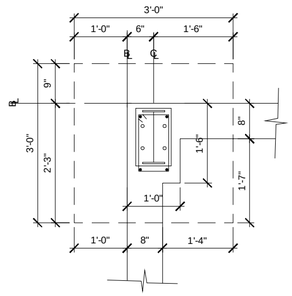
S&M ENGINEERING, P.A.
7200 W. 132nd Street, Suite 350; Overland Park, KS 66213
Tel: (913) 621-7273; Cell: (913) 206-7273
E-Mail: SAMDESIGN100@SBCGLOBAL.NET

A New Project for
MoDOT
Milan Mechanics
Milan, MO

DRAWN BY	say
CHECKED BY	sy
DATE	September 2016
SCALE	As Indicated
JOB NUMBER	G16085

Foundation Plan and Notes

S1



F1 Plan View

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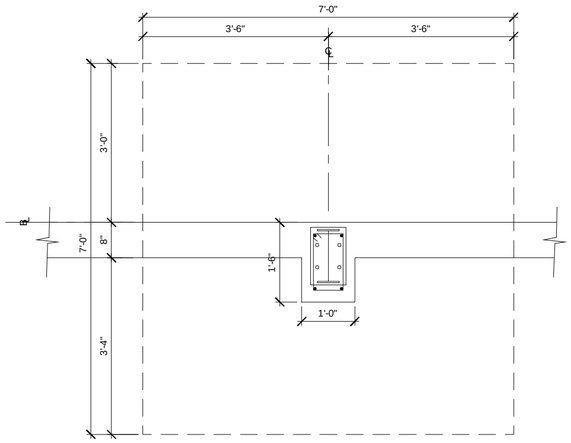

F2 Plan View

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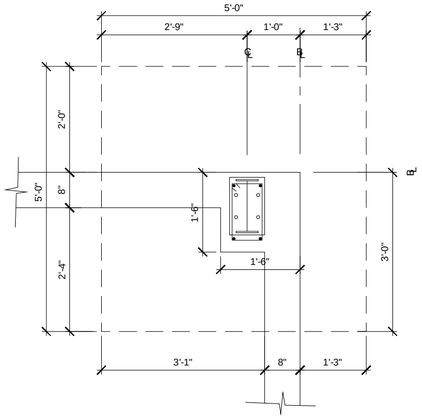

F3 Plan View

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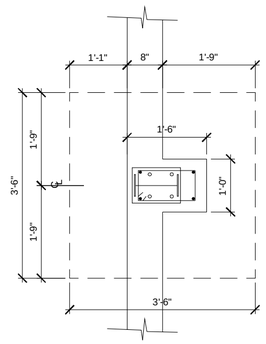

F4 Plan View

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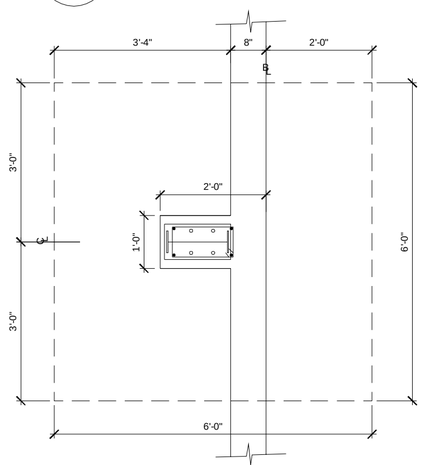

F5 Plan View

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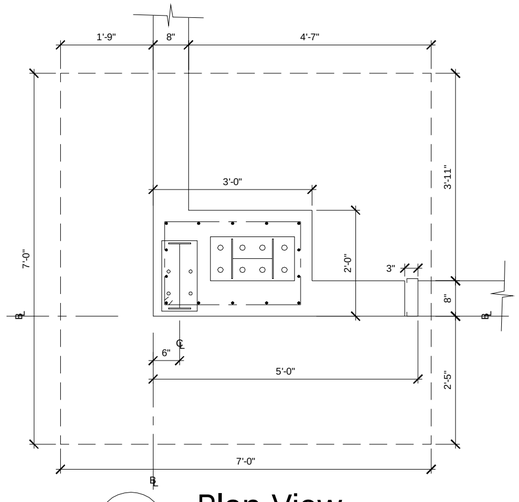

F6 Plan View

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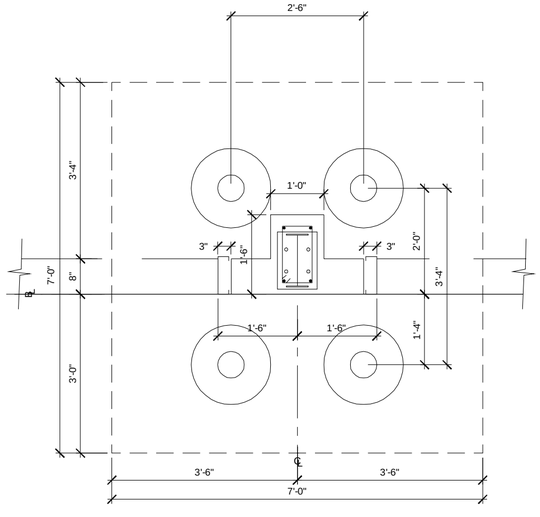

F7 Plan View

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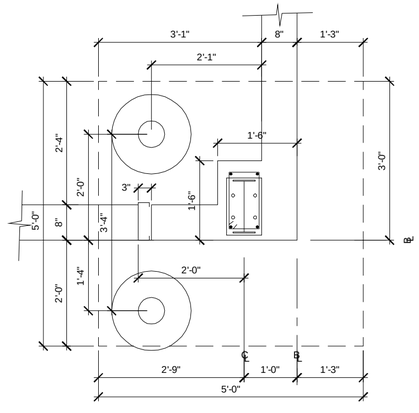

F8 Plan View

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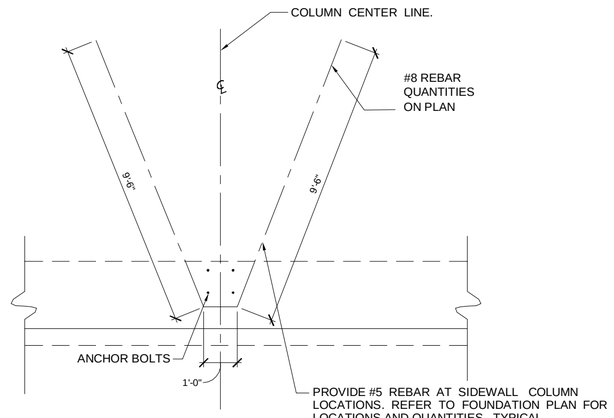

Hair Pin Detail

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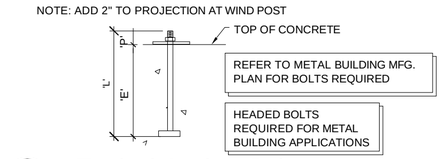

Typical Anchor Bolt

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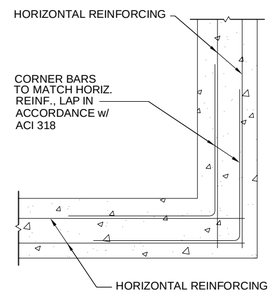

Typical Corner Bars

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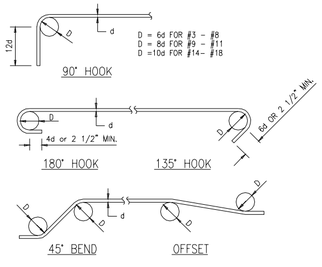

Typical Rebar Bend Detail

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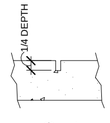

Sawed Control Joint

Detail Cont. Joints

N.T.S.

9/23/16

STATE OF MISSOURI
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BLUESCOPE CONSTRUCTION
PROJECT # G-16085
MoDOT Milan Mechanics
Milan, MO

Project Engineer

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A New Project for
MoDOT
Milan Mechanics
Milan, MO

DRAWN BY
SAY
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SAY
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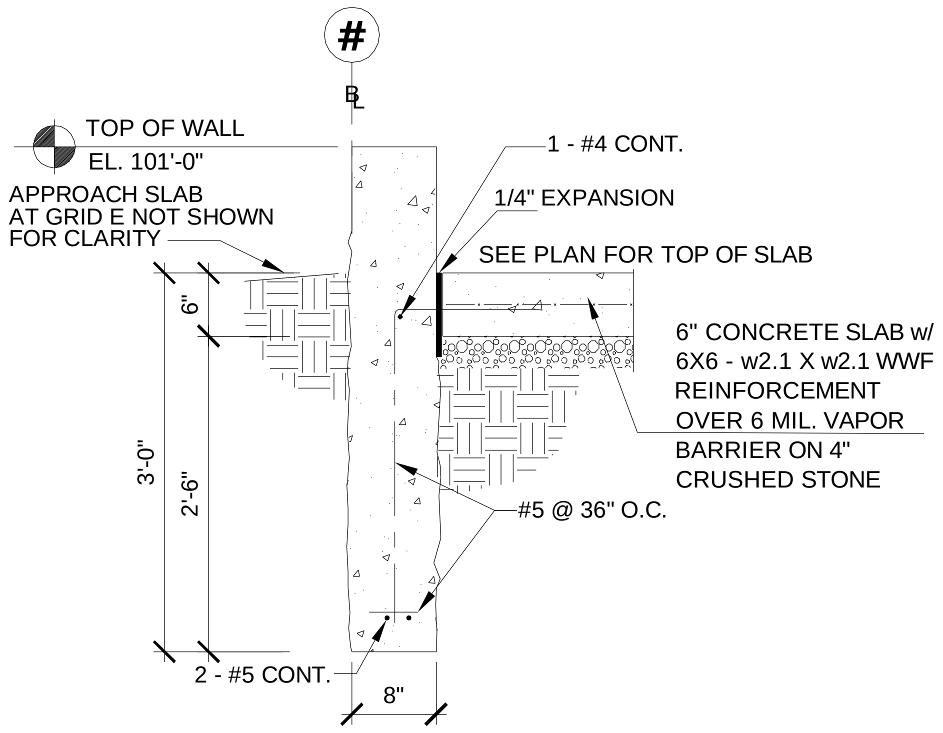
Foundation Details

S2



A SECTION

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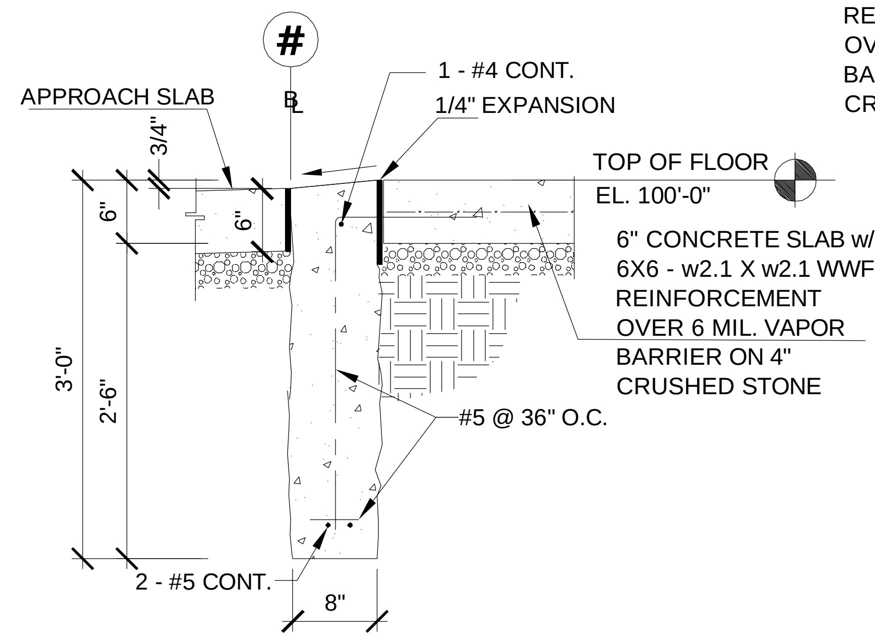

B SECTION @ DOORS

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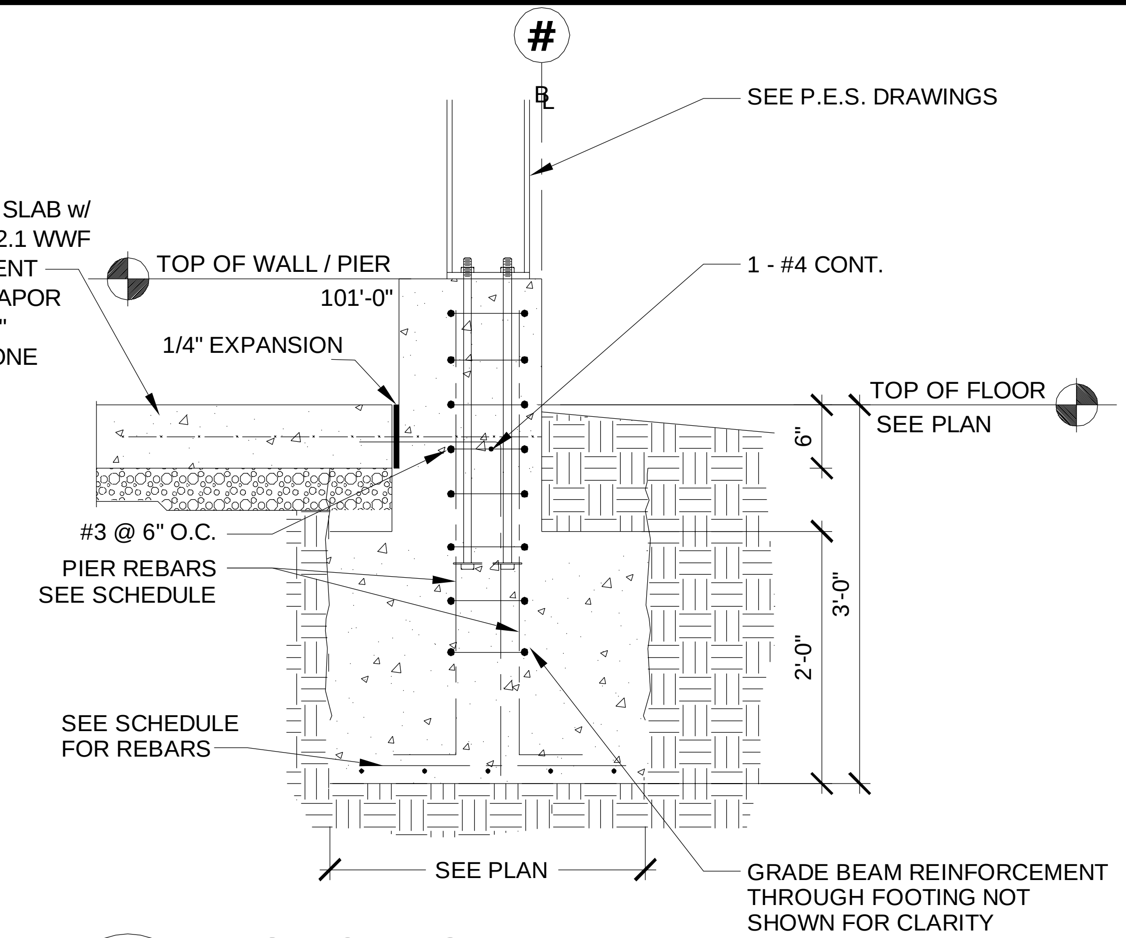

C SECTION

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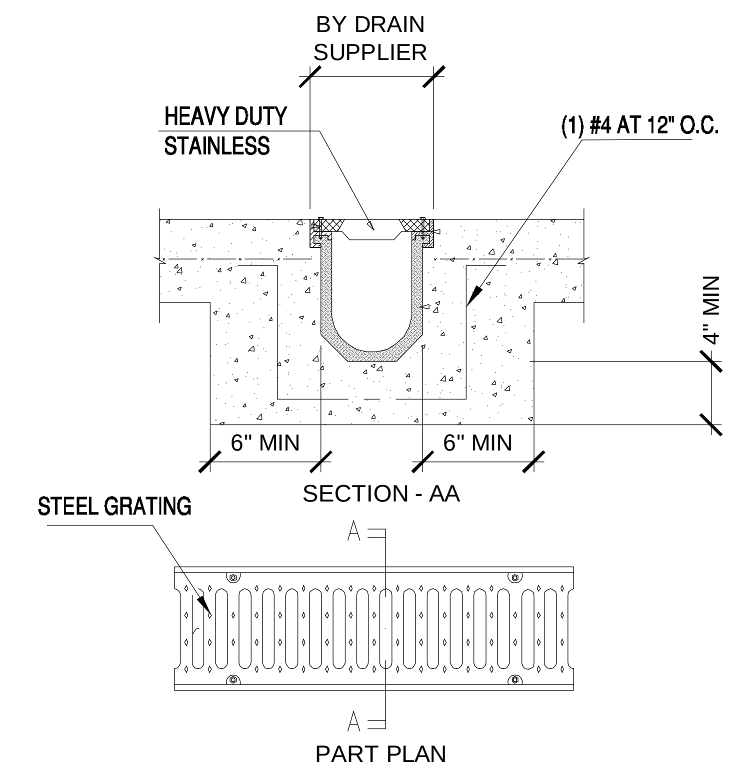

D SECTION

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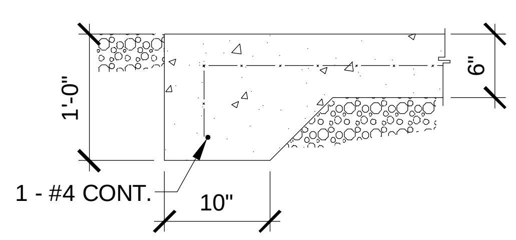

E SECTION

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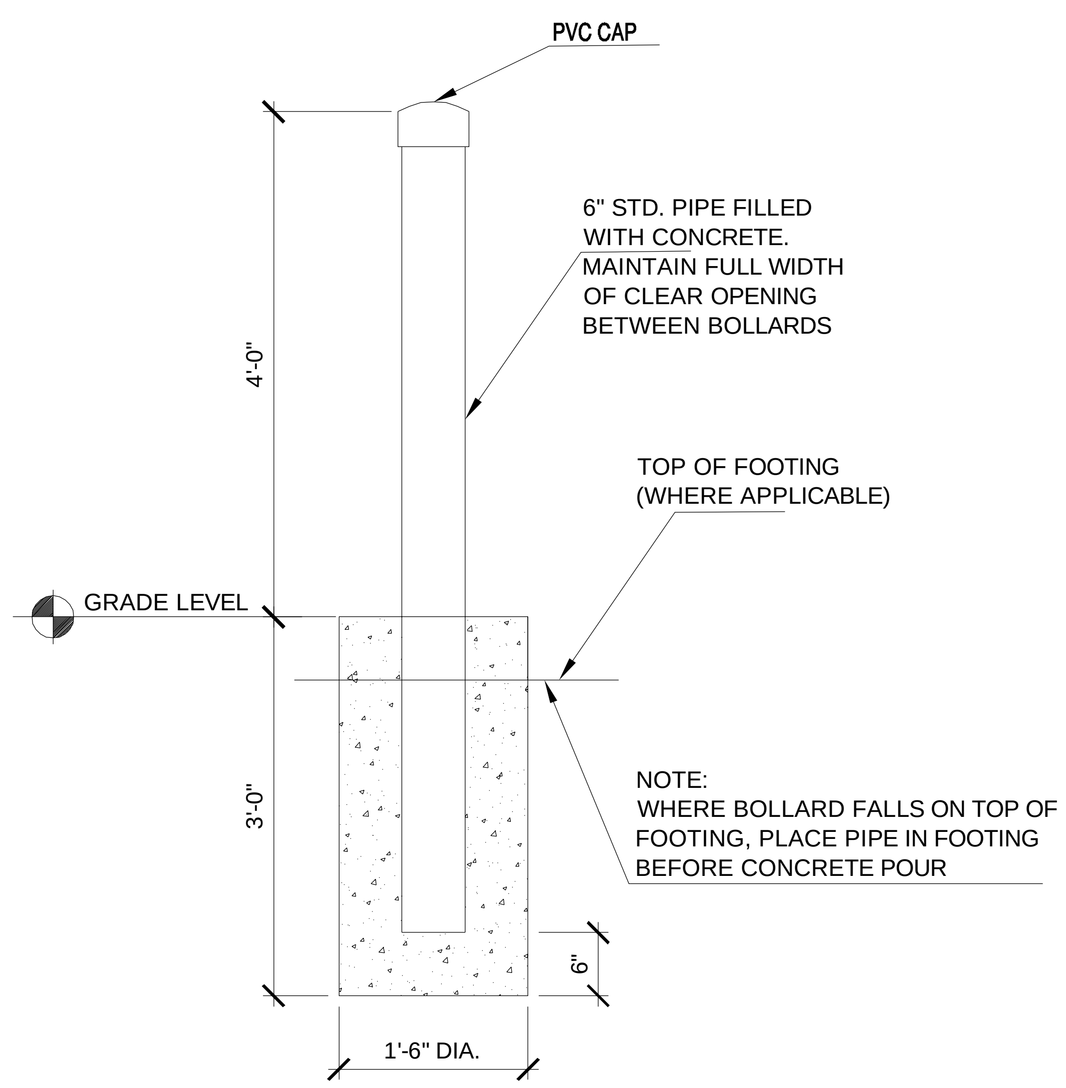
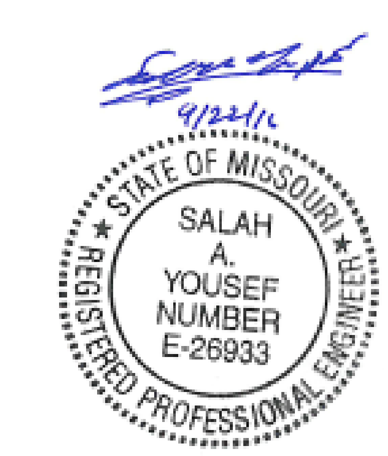


F BOLLARD DETAIL

N.T.S.

FOOTING SCHEDULE

FTG. MARK	PIER: TOP OF PIER ELEV. VERT. PIER REINF. PIER TIES: a = b =	FOOTING TOP OF FOOTING ELEV. BOTTOM OF FOOTING ELEV. FOOTING SIZE (WxLxT) FOOTING REINFORCING	ANCHOR RODS (QTY.) DIA. x (L) A36 THREADED ROD HEAVY HEX NUT UPSET THREADS
F1	T.O.P. = 101.00 (4) – #5 VERT. #3 TIES AT 6" O.C. a = 6"; b = 12"	T.O.F. = 99'–6" B.O.F. = 97'–6" SIZE = 3'–0" x 3'–0" x 2'–0" (6) #5 x 2'–6" EACH WAY	(4) 3/4"ø x 36"
F2 & F7	T.O.P. = 101.00 (4) – #5 VERT. #3 TIES AT 6" O.C. a = 6"; b = 12"	T.O.F. = 99'–6" B.O.F. = 97'–6" SIZE = 7'–0" x 7'–0" x 2'–0" (12) #5 x 6'–6" EACH WAY	(4) 3/4"ø x 36"
F3 & F8	T.O.P. = 101.00 (4) – #5 VERT. #3 TIES AT 6" O.C. a = 6"; b = 12"	T.O.F. = 99'–6" B.O.F. = 97'–6" SIZE = 5'–0" x 5'–0" x 2'–0" (9) #5 x 4'–6" EACH WAY	(4) 3/4"ø x 36"
F4	T.O.P. = 101.00 (4) – #5 VERT. #3 TIES AT 6" O.C. a = 6"; b = 12"	T.O.F. = 99'–6" B.O.F. = 97'–6" SIZE = 3'–6" x 3'–6" x 2'–0" (6) #5 x 3'–0" EACH WAY	(4) 3/4"ø x 36"
F5	T.O.P. = 101.00 (4) – #5 VERT. #3 TIES AT 6" O.C. a = 6"; b = 12"	T.O.F. = 99'–6" B.O.F. = 97'–6" SIZE = 6'–0" x 6'–0" x 2'–0" (11) #5 x 5'–6" EACH WAY	(4) 3/4"ø x 36"
F6	T.O.P. = 101.00 (14) – #5 VERT. #3 TIES AT 6" O.C. a = 18"; b = 30"	T.O.F. = 99'–6" B.O.F. = 97'–6" SIZE = 7'–0" x 7'–0" x 2'–0" (12) #5 x 6'–6" EACH WAY	(4) 3/4"ø x 36" @ BLDG. COLUMN (8) 1 1/4"ø x 36" @ WIND POST



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Foundation Sections

S3